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Federal Communications Commission
Office of Secretary

May 1, 1997

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By Messenger

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
Washington, D.C. 20554

Re: WT Docket No. 97-81, Amended Comments of Radscan, Inc.

Dear Mr. Caton:

On behalf of Radscan, Inc., I submit herewith an original and four copies of its amended comments in the above-referenced proceeding. Radscan's comments, filed on April 21, 1997 (the original comment date in this proceeding) inadvertently failed to include two referenced attachments. This amended filing includes the attachments and corrects several typographical errors. Please direct any questions to the undersigned counsel to Radscan.

Sincerely,

J. Thomas Nolan

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Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of the Commission's Rules	)	WT Docket No. 97-81
Regarding Multiple Address Systems	)	

To the Commission:

COMMENTS OF RADSCAN, INC.

Edwin N. Lavergne
J. Thomas Nolan
Ginsburg, Feldman and Bress,
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1250 Connecticut Avenue, NW
Washington, DC 20036
202-637-9000

Dated: May 1, 1997

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SUMMARY

In this proceeding, the Commission takes important steps to enhance the flexibility of Multiple Address Systems (MAS) and to rationalize the awarding of licenses for presently unused spectrum recently allocated to MAS. Radscan, Inc., one of the largest MAS operators in the country, generally supports the Commission's proposals. However, Radscan is concerned that, in paving the way for new MAS service offerings, the Commission may inadvertently block existing services like Radscan's that have been making efficient, beneficial use of the original MAS bands allocated in 1982.

Radscan provides wireless alarm monitoring services to central station alarm companies. Radscan's customers, like ADT Security Systems and Wells Fargo Alarm Systems, generally monitor their subscribers' security systems in homes and businesses through wireline connections. Through the Radscan MAS network, these companies can supplement and enhance the reliability of their security monitoring services.

Radscan's primary concern arises from the Commission's tentative proposal to allocate the 928/952/956 MHz MAS bands, in which Radscan operates, exclusively to private, internal use. Because Radscan's alarm monitoring service may be categorized as a subscriber-based, rather than as a private, internal system, the Commission's proposal could have the effect of making Radscan's use of these bands impermissible, and could deny Radscan the ability to expand beyond its existing coverage areas.

The Commission need not, and should not, restrict the use of the 928/952/956 MHz bands to private, internal use. The Commission's tentative conclusion that these bands are used primarily to satisfy licensees' internal communications needs is questionable; Radscan alone

likely serves more remote units than all private users in these bands combined. Unlike many MAS operators, for whom one MAS channel pair is as good as any other, Radscan is committed, for sound engineering and business reasons, to the use of its present channels. Thus, the Commission's proposed restriction could force Radscan out of the alarm monitoring business entirely, and deprive the public of important safety benefits. It would also contribute to inefficient spectrum use because subscribers in new areas that could most efficiently be served by expanding the Radscan network would require service on other frequencies, needlessly consuming valuable spectrum capacity.

Moreover, the Commission need not restrict these bands in order to open the 932/941 MHz bands to competitive bidding. The 928/952/956 MHz bands are nearly saturated in all major markets, so no new applicant in the 928/952/956 MHz bands may get for free what an applicant in the 932/941 MHz bands must buy at auction. Therefore, consistent with its flexible use policy, the Commission should retain the present mixed use rules for the 928/952/956 MHz bands, which will permit Radscan and other subscriber-based licensees to continue providing services that maximize the efficient use of existing MAS spectrum.

Radscan also believes that geographic-area licensing would be beneficial to the Commission and MAS operators alike, and proposes that incumbent subscriber-based licensees in the 928/952/956 MHz bands be permitted to convert site-by-site licenses, or groups of licenses, to Economic Area (EA) licenses. An incumbent site-by-site licensee wishing to convert to an EA license would file a petition with the Commission; if other companies desired to provide subscriber-based services on the same channels in that EA, the Commission would then

award the EA rights by competitive bidding. Incumbent private, internal licensees within a converted EA would be grandfathered or relocated to other MAS channels.

Finally, Radscan supports the Commission's proposals to provide licensees with technical and operational flexibility in the MAS bands. MAS incumbents, as well as new applicants, should be granted such additional flexibility.

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of the Commission's Rules	)	WT Docket No. 97-81
Regarding Multiple Address Systems	)	

To the Commission:

COMMENTS OF RADSCAN, INC.

Radscan, Inc. ("Radscan"), by its attorneys, and pursuant to Section 1.415(a) of the Commission's Rules, hereby submits its comments in response to the Notice of Proposed Rulemaking in the above-captioned proceeding.[1/] The Notice proposes various ways to maximize use of spectrum allocated to Multiple Address Systems (MAS) licensed under Parts 22 and 101 of the Commission's Rules.

Radscan agrees with the Commission's proposed treatment of subscriber-based services in the 932/941 and 928/959 MHz bands.[2/] Radscan also supports the Commission's proposed geographic-area licensing approach, its proposals for technical and operational flexibility, and the certainty and efficiency gained by auctioning contested licenses. However, the Commission's tentative proposal to limit the 928/952/956 MHz bands exclusively to private, internal use

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[1/] *Amendment of the Commission's Rules Regarding Multiple Address Systems, Notice of Proposed Rule Making*, FCC 97-58 (rel. Feb. 27, 1997) (*Notice*).

[2/] These comments adopt the Commission's terminology, referring to paired spectrum in the 932-932.5 MHz and 941-941.5 MHz range as the "932/941 MHz bands," paired spectrum in the 928.85-929 MHz and 959.85-960 MHz range as the "928/959 MHz bands," and paired spectrum in the 928-928.85 MHz and 952-952.85 MHz range together with unpaired spectrum in the 956.25-956.45 MHz range as the "928/952/956 MHz bands."

would deny Radscan the advantages extended to other subscriber-based licensees because Radscan's channels happen to be located in these bands. As described more fully below, Radscan urges the Commission to retain the current mixed-use rules with respect to the 928/952/956 MHz bands, and not to reallocate those bands exclusively for private, internal use. In addition, Radscan proposes that the Commission adopt a form of geographic-area licensing for subscriber-based MAS facilities in the 928/952/956 MHz bands.

I. INTRODUCTION

Radscan, a wholly-owned subsidiary of Pittway Corporation, is one of the largest MAS licensees in the United States. Radscan presently holds licenses for 172 MAS master stations, serving over 70,000 remote units in 21 major metropolitan areas throughout the United States.[3/] Radscan has been adding nearly 2,000 new subscriber remote units every month, and expects new installations to accelerate as demand for its services increases.

Radscan provides sophisticated security alarm monitoring services to central station alarm monitoring companies. Radscan's customers are companies such as ADT Security Systems and Wells Fargo Alarm Services that are already in the business of monitoring the security systems of their customers through wireline services. Because radio signals are not influenced by the same factors that may interfere with wireline communications, Radscan's services can be used to supplement and enhance the reliability of existing security monitoring systems.

[3/] Radscan presently holds MAS licenses in Atlanta, Baltimore, Boston, Chicago, Denver, Detroit, Houston, Las Vegas, Los Angeles, Memphis, Miami, Minneapolis, Nashville, New York, Philadelphia, Phoenix, Portland (Maine), San Francisco, St. Louis, Tampa, and Washington, D.C.

The service Radscan offers is typically superior to that which a central station could provide for itself if it applied for its own MAS licenses because, through the Radscan network, a central station can achieve greater coverage and reliability without the capital investment necessary to build a private system. Radscan makes extremely efficient use of spectrum through frequency reuse techniques. Indeed, in a single metropolitan area, Radscan can accommodate up to 128 central stations and hundreds of thousands of subscriber remotes on just two MAS frequency pairs.[4/]

Many remote units are placed in high-risk security installations such as banks and jewelry stores. In such an environment, an alarm, or even a communications failure, results in a call to the police. Thus, the need for optimum reliability is paramount. Radscan increases system reliability by constructing multiple master stations with overlapping service areas. This technique permits each remote subscriber to communicate with at least two, and in most cases more than two, master stations.

Each master station is a free-standing, multi-microprocessor system capable of responding to the transmissions of remote units, decoding messages, validating transmitted codes, buffering and screening classes of messages, transmitting to remotes, communicating with other master stations in the system, and communicating by back-up telephone modem with central stations. Remote units are either two-way transceivers which are continually polled by the master stations, or one-way transmitters that send messages at certain intervals to master stations. If a master station receives an alarm signal or loses contact with a remote unit, it sends a message to the

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[4/] Radscan holds licenses for the two 25 kHz channel pairs at 928.0375/952.0375 MHz and 928.2375/952.2375 MHz.

appropriate central station which then alerts police, fire, or other appropriate public safety officials.

Radscan is a pioneer in the application of long-range radio technology to the security industry, and has been an active participant in many of the Commission's MAS proceedings. In 1983, in response to the Commission's allocation of MAS frequencies one year earlier, Radscan and its manufacturing affiliate, ADEMCO, also a wholly-owned subsidiary of Pittway Corporation, embarked upon a multimillion-dollar development effort to design MAS transmitters and receivers that are affordable, spectrum-efficient, and versatile.

After years of effort, ADEMCO began manufacturing low-cost one-way and two-way MAS subscriber equipment, high performance MAS master stations, and installation tools for unskilled installers. None of this equipment existed before ADEMCO's involvement in MAS manufacturing and development, and ADEMCO continues to be the sole supplier of such equipment.

Although the security industry traditionally has been skeptical of radio-based systems, Radscan and ADEMCO have a proven track record of success. ADEMCO's equipment is approved by Underwriters' Laboratories for the highest grades of security service. In addition, the National Fire Prevention Association added Radscan's service to its fire prevention standards in 1990, enabling ADEMCO equipment to be used to meet building code requirements. Through extensive product development and engineering, ADEMCO has designed remote transmitters that sell for as little as $100.

II. THE COMMISSION SHOULD RETAIN THE CURRENT MIXED USE OF THE 928/952/956 MHZ BANDS BECAUSE THE PREDOMINANT USE OF THESE BANDS IS UNCERTAIN, AND RESTRICTING THEM TO PRIVATE USE WOULD HARM LICENSEES AND DECREASE SPECTRUM EFFICIENCY WITHOUT ANY OFFSETTING BENEFITS.

The Commission undertook this proceeding, in part, to aid in the processing of the more than 50,000 applications it has received for 40 channels in the 932/941 MHz bands.[5/] The Commission found that the principal use proposed by these applicants involves subscriber-based services.[6/] Thus, the Commission tentatively concludes that the 932/941 MHz band should be designated exclusively for subscriber-based services, and licenses in this band should be awarded through competitive bidding.[7/]

Radscan's interest in this proceeding lies in the 928/952/956 MHz bands, in which Radscan's present and future operations are confined. The Commission tentatively concludes that these bands should be designated exclusively for private, internal use because a survey of the Commission's licensing database reveals that approximately 70 percent of the licenses in these bands are used to meet licensees' internal communications needs.[8/] Radscan believes that the use of these bands is not so clear-cut, and given the present mixed use of the bands it makes little sense to restrict these bands exclusively to private use. Moreover, the proposed use restriction would harm the many subscriber-based licensees in these bands and result in less

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[5/] *Notice* at ¶ 8.

[6/] *Notice* at ¶ 10.

[7/] *Notice* at ¶¶ 11, 48-51. The Commission also reached the same conclusion with respect to the 928/959 MHz bands, in which the majority of licensees are already subject to auction rules. *Id.* at ¶ 50. The Commission is permitted to grant licenses to use radiofrequency spectrum through auctions if the Commission determines that "the principal use of such spectrum will involve, or is reasonably likely to involve, the licensee receiving compensation from subscribers in return for which the licensee" enables subscribers to receive or transmit communications signals on the licensed frequencies. 47 U.S.C § 309(j).

[8/] *Notice* at ¶ 12.

efficient use of MAS spectrum. Finally, classifying a service as "subscriber-based" or "private use" is irrelevant for any purpose except the Commission's auction authority under Section 309(j) of the Communications Act, and restricting the 928/952/956 MHz bands is not necessary to achieve the Commission's goals in this proceeding. Given the Commission's policy to encourage flexible uses of spectrum, and the absence of any technical reasons not to continue the present mixed use policy, the Commission should not restrict these bands to private, internal use.

A. Determining the Predominant Use of the 928/952/956 MHz Bands is Uncertain Due to Difficulties in Categorizing Uses and Counting the Amount of Use.

The factual grounding for the Commission's tentative proposal to restrict the 928/952/956 MHz bands to private, internal use is questionable. The Commission surveyed approximately 7,700 licenses currently granted for use of the 928/952/956 MHz bands and estimated that about 70 percent are used to satisfy licensees' internal communications needs, with the remainder being used on a private carrier basis.[9/] However, the distinction between a subscriber-based use and a private use of these frequencies is not clear-cut.

For example, Congress equated subscriber-based use to the resale of spectrum to subscribers.[10/] Radscan neither resells spectrum nor provides its customers or their subscribers with *any* transmission capacity on its frequencies. Radscan instead provides a comprehensive alarm monitoring service to central stations. Spectrum is only one resource used in providing this service; Radscan integrates its spectrum with custom-designed equipment and computer software. Radscan uses its transmission capacity to send and receive communications of its own

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[9/] *Notice* at ¶ 12.

[10/] H.R. Rep. No. 103-111, 103d Cong., 2d Sess. 253 (1993).

design, decodable only by its own equipment. This could mean that Radscan's use is not subscriber-based, but rather satisfies its private, internal communications needs.[11/] Given the level of uncertainty in categorizing just Radscan's use of its frequencies, it is surely doubtful that the Commission can with confidence survey 7,700 licenses and assign them to categories.

Another source of uncertainty in determining the predominant use of the 928/952/956 MHz bands arises from the different ways in which the amount of each use can be measured. Counting master station licenses, as the Commission apparently did, is only one method, and may not be the best. In fact, the question of predominant use of the 928/952/956 MHz bands has no one answer, but depends upon the methodology chosen to measure it.

For example, the Commission has stated that it may count the amount of use on the basis of information throughput, time, or spectrum.[12/] One method of determining the predominant use that would likely correlate well with information and transmission time is to count remote units. Most private MAS licensees in the 928/952/956 MHz bands communicate with only a handful of remote units.[13/] If 70 percent of 7,700 master stations each communicated with four remotes, then a total of only 22,000 remote units would be deployed for private, internal use. By contrast, with its 172 master stations Radscan currently serves approximately 70,000 remote units, a ratio of about 400 remotes per master station.[14/] Therefore, counting *only* Radscan's

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[11/] If the Commission determines that Radscan's service is not subscriber-based, then many of Radscan's concerns in this proceeding are alleviated.

[12/] *Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, Second Report and Order*, 9 FCC Rcd 2348, 2354 (1994).

[13/] The MAS rules require that each master station serve a minimum of four remote units. 47 C.F.R. § 101.147(b).

[14/] This ratio is computed only for comparison. There is no actual correspondence between master stations and remote units, because each remote unit communicates with multiple master stations, and factors other than the number of master stations limit overall system size.

remotes, it is already likely that 70 percent or more of the use of the 928/952/956 MHz bands is subscriber-based.

The uncertainty in determining the predominant use of the 928/952/956 MHz bands is not surprising because the use distinction is irrelevant to licensees in these bands. There is simply no operational or technical reason to classify a system as private or subscriber-based. It is understandable that the Commission must make this regulatory distinction in the case of frequencies identified for competitive bidding. However, in the case of the 928/952/956 MHz bands, in which the Commission has tentatively concluded licenses should *not* be awarded by competitive bidding, the distinction is unnecessary.

B. Restricting the Use of the 928/952/956 MHz Bands Exclusively to Private Internal Use Would Harm Existing Subscriber-Based Licensees and Promote Inefficient Spectrum Use.

The Commission's proposal to restrict the use of the 928/952/956 MHz bands exclusively to private use also has the potential to cause great harm to individual licensees and to jeopardize public safety. While some MAS applicants may view channels within the various MAS bands as fungible commodities, Radscan does not. For reasons explained in detail below, Radscan's business is entirely dependent upon continued and expanding use of its two channel pairs within the 928/952/956 MHz band originally allocated for MAS (including subscriber-based uses) in 1982. As Radscan has previously demonstrated to the Commission,[15/] and reiterates below, it would be prohibitively expensive for Radscan to convert its wireless alarm monitoring network to use any other frequencies.

[15/] *See* Petition for Reconsideration of Radscan, Inc., PR Docket No. 90-260, at 12-15 (Aug 7, 1991).

The Commission's tentative proposal to restrict the 928/952/956 MHz bands to private, internal use would likely grandfather Radscan's existing licenses but could well prevent Radscan from licensing new master stations on its current frequencies.[16/] However, the ability to expand the use of its current channels is necessary for Radscan to provide alarm monitoring service at reasonable rates, and is critical to efficient spectrum use. Great harm would be done -- both to Radscan and the public -- if the rules ultimately adopted in this proceeding restrict Radscan's ability to expand its service offerings in the 928/952/956 MHz bands.

Radscan expands its system coverage in two ways, both of which require that it retain the ability to license additional facilities on its present channels (928.0375/952.0375 and 928.2375/952.2375 MHz).[17/] First, where Radscan has an established presence, its systems expand in coverage outward from the center to serve more subscribers as suburban growth and changes in demographics generate the need for its services over an expanding area. Within a single system, it is *imperative* that all remote units and master stations operate on the same channel pairs. If they did not, Radscan would lose the system efficiency and reliability gains that it achieves through its overlapping master station coverage. Radscan is committed to using its current channels in the markets it currently serves, and cannot relocate its operations to another part of the spectrum. As the Commission has already recognized, such a relocation

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[16/] *See Notice* at ¶ 20 ("Incumbents . . . would not be permitted to expand their systems without consent of the geographic area licensee."). *See also Amendment of Part 90 of the Commission's Rules to Facilitate Future Development of SMR Systems in the 800 MHz Frequency Band, First Report and Order, Eighth Report and Order, and Second Further Notice of Proposed Rule Making*, 11 FCC Rcd 1463, 1513-14 (1995) (*800 MHz SMR Order*) (restricting the ability of incumbents to expand their systems).

[17/] In certain instances, Radscan has been able to use other nearby channels in the 928/952/956 MHz bands.

would face insurmountable obstacles, among which are the risks to life and property that would arise if Radscan took its systems off line for even a short period of time.[18/]

Not only would the Commission's tentative proposal to restrict the use of the 928/952/956 MHz bands to private uses harm Radscan and the public, it would also promote inefficient spectrum use. If Radscan is not permitted to expand its existing systems into presently unserved areas, then these areas could be served only by independent systems using greater quantities of spectrum much less efficiently. When Radscan expands its systems, it can place co-channel master stations closer together than the Commission's spacing rules ordinarily permit because it coordinates the transmissions among its own master stations and remote units to avoid interference. An independent licensee could not locate co-channel stations close to Radscan's because of the spacing rules designed to prevent interference among MAS systems. Instead, it would have to use different channels, and occupy more spectrum, to provide the same service Radscan could provide if it simply expanded its existing system.

The second way in which Radscan expands system coverage areas is to construct facilities in geographic markets it does not presently serve. But even in new markets, Radscan would be unable to conform to the Commission's tentative plan for the MAS bands because Radscan must operate on channels within the 928/952/956 MHz bands for which its equipment is designed. Radscan could not convert its equipment to operate in the 932/941 MHz bands without significant engineering expense because the difference between 928 and 932 MHz is sufficiently great that circuits designed for 928 MHz operation cannot easily be adapted for operation at 932

[18/] *Amendment of Rules to Eliminate Grandfathering Provisions Applicable to Licensees on MAS Frequencies, Memorandum Opinion and Order*, 8 FCC Rcd 2801, 2802 n.7 (1993) (*MAS Reconsideration Order*). *See also id.* at 2802 (acknowledging that Radscan's and others' systems "are operating efficiently on their current bandwidth assignments and that disruption . . . would be detrimental to the economic viability of industries that employ MAS systems.").

MHz -- the difference between 952 and 941 MHz is even greater.[19] Moreover, Radscan's transceivers are designed for the precise channel separation -- 24 MHz -- between the transmit and receive channels in the 928/952 MHz channel pairs. These circuits would not work at all with the 9 MHz separation between the 932/941 MHz channel pairs or the 31 MHz separation between the 928/959 MHz channel pairs.[20] Furthermore, if two separate systems operating in different frequency bands expanded to the point at which they began to offer overlapping coverage, Radscan would be unable to realize economies derived from operating the two systems as a single, combined system.

Redesigning equipment to use channels in the 932/941 MHz bands would raise the cost of the equipment to a level that would make it unacceptable to consumers. Furthermore, Radscan would have to develop and implement system configuration management tools to track which remote units could be used in which systems, and to control production and inventory of equipment designed for the various frequencies. Ultimately, if the Commission eliminates subscriber-based operations on Radscan's channels, Radscan would be forced to reconsider whether the economics of operating under such circumstances permit it to continue in the alarm monitoring business. Thus, the public could lose the important safety benefits Radscan has provided for many years.

C. Restricting the 928/952/956 MHz Bands Exclusively to Private, Internal Use is Not Necessary to Achieve the Commission's Goals in This Proceeding.

Given the uncertainty in determining the principal use of the 928/952/956 MHz bands and the potential harm to subscriber-based licensees and their customers that would result from

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[19] *See* Engineering Statement of Gerald S. Harrison (Attachment A).

[20] *Id.*

restricting the bands exclusively to private use, the Commission should impose such a restriction only if it is absolutely necessary to achieve its goals in this proceeding. The Commission did not analyze the need for restricting the 928/952/956 MHz bands to private use; it seems likely that the rationale was to avoid the appearance of inequity between licensees that purchase their licenses at auction in the 932/941 and 928/959 MHz bands and those that obtain their licenses on a first-come, first-served basis in the 928/952/956 MHz bands. However, because the 928/952/956 MHz bands are nearly saturated, this concern is unfounded.

As early as 1989, the 928/952/956 MHz bands were already congested, and the Commission found it appropriate to relieve the pressure on these frequencies by allocating new spectrum to the MAS service.[21/] The flood of applications the Commission received in 1992 when it opened filing windows for the new spectrum is testimony to the pent-up demand for MAS spectrum caused by saturation of the existing allocation in the 928/952/959 MHz bands. Now, five years later, there is virtually no possibility of shoehorning a useful MAS system into any major market area on channels in these bands.[22/]

The saturation of the 928/952/959 MHz bands means that no new applicant in these bands may obtain for free what an auction participant in the 932/941 MHz bands must pay for. There are no unencumbered major markets in the 928/952/959 MHz bands, and the areas that remain are unlikely to support stand-alone commercial MAS operations. On the other hand, these areas

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[21/] *See Amendment of Parts 1, 21, 22, 74, and 94 of the Commission's Rules to Establish Service and Technical Rules for Government and non-Government Fixed Service Usage of the Frequency Bands 932-935 MHz and 941-944 MHz, Second Report and Order*, 4 FCC Rcd 2012, 2013 (1989) (government comments citing rapid growth in MAS use and shortage of frequencies in existing bands).

[22/] *See* Engineering Statement of Sydney T. Black (Attachment B).

may yet be useful for the expansion of incumbent MAS systems. Radscan, for example, can make efficient use of spectrum in areas in which it is already the incumbent MAS operator.

D. Retaining the Existing Mixed Use Rules is Consistent with the Commission's Spectrum Management Policy.

The Commission has repeatedly expressed its desire to promote the flexible use of spectrum. The Commission has created new services with a flexible use policy,[23] and amended its rules to provide more flexible uses in existing services.[24] Recently, in the 220 MHz service, the Commission *eliminated* the same kind of restriction -- a private, internal use restriction -- that it now proposes to add in the MAS service.[25] Many of the same factors that led to the elimination of the restriction in that proceeding are also present here.

In the 220 MHz proceeding, the Commission noted that mixed use is "an effective means of promoting efficient use of the spectrum," and added that partitioning and disaggregation rules should help meet the needs of non-commercial users.[26] The Commission has similarly proposed partitioning and disaggregation rules for MAS, and has requested comment on this proposal.[27] Radscan supports this proposal. Partitioning and disaggregation permit a company with the need for coverage in a small geographic area, or for a small amount of spectrum, to

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[23] *Amendment of the Commission's Rules to Establish New Personal Communications Services, Second Report and Order*, 8 FCC Rcd 7700, 7710-13 (1993).

[24] *Amendment of the Commission's Rules to Permit Flexible Service Offerings in the Commercial Mobile Radio Services, First Report and Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd 8965 (1996).

[25] *Amendment of Part 90 of the Commission's Rules to Provide for the Use of the 220-222 MHz Band by the Private Land Mobile Radio Service, Third Report and Order; Fifth Notice of Proposed Rulemaking*, FCC 97-57, at ¶ 42 (rel. Mar. 12, 1997) (*220 MHz Order*).

[26] *Id.*

[27] *Notice* at ¶¶ 27-33.

negotiate with a geographic-area licensee for only the resources necessary to satisfy the company's requirements. The Commission's proposals will promote efficient spectrum use and allow companies to construct MAS systems to satisfy their internal communications needs in the 932/941 MHz bands.

In addition, the Commission noted in the 220 MHz proceeding that "companies may be able to meet some of their internal communications needs through the purchase of service from a commercial provider."[28/] The same holds true in the MAS bands. Indeed, the Commission proposes to establish a *presumption* that MAS geographic area licensees will operate on a common carrier basis, from which it necessarily follows that licensees will make MAS transmission capacity available to the public.[29/] This will provide an additional supply of MAS spectrum for private, internal use.

The Commission has asked for an analysis of the demand for private-use spectrum.[30/] Under a mixed-use approach, private, internal users will still be able to apply for available spectrum in the 928/952/956 MHz bands on a first-come, first-served basis. However, as discussed above, the likelihood of commercially available transmission capacity on a common carrier basis, together with partitioning and disaggregation rules, make it far less likely that internal communications needs justify the creation of a purely private allocation in the 928/952/956 MHz bands.

The Commission has stated its determination to "grant licensees as much operational flexibility as possible," recognizing that flexible use "help[s] to ensure the highest and best use

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[28/] *220 MHz Order* at ¶ 42.

[29/] *See Notice* at ¶ 44.

[30/] *Notice* at ¶ 31.

of . . . spectrum."[31] That policy has served the MAS community well over the years, and the Commission should retain that policy by permitting unrestricted use of the 928/952/956 MHz bands.

III. IF THE COMMISSION RESTRICTS THE 928/952/956 MHZ BANDS TO PRIVATE, INTERNAL USE, IT SHOULD CLARIFY THAT EXISTING USES OF THESE BANDS ARE GRANDFATHERED INDEFINITELY.

If the Commission designates the 928/952/956 MHz bands exclusively for private use which, as demonstrated above, would be a mistake, it should clarify that it will grandfather existing *uses*, and not just existing licenses, in those bands indefinitely. The Commission has tentatively proposed to permit licensees like Radscan, which currently provide subscriber-based services using channels in these bands, to continue providing those services.[32] For the reasons given above, unless Radscan is also grandfathered as to the ability to apply for *new* licenses to augment its existing subscriber-based operations within these bands, Radscan would lose the efficiency gains that it achieves through the use of multiple master stations on identical frequency pairs, and the public could lose the important public safety benefits Radscan provides.

In developing geographic-area licensing rules for other services, the Commission has restricted incumbent site-by-site licensees operating within newly created geographic areas to their existing service contours.[33] However, the proposal to restrict the 928/952/956 MHz

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[31] *See Notice* at ¶ 45. *See also Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service, Notice of Proposed Rulemaking*, FCC 96-441 (rel. Nov. 12, 1996).

[32] *See Notice* at ¶ 13 ("We . . . would grandfather existing subscriber-based services currently being provided on these MAS frequencies.").

[33] *See, e.g., 800 MHz SMR Order*, 11 FCC Rcd at 1513 ("restricting incumbents' ability to expand is necessary to balance the interests of EA licensees in building viable systems"); *Amendment of Parts 21 and 74 of the Commission's Rules With Regard to Filing Procedures in* (continued...)

bands to private use is different. In the other services, incumbent site-by-site licensees can expand their systems in a number of different ways (*e.g.*, by purchasing licenses for their geographic areas at auction, by purchasing rights to partitioned geographic areas from the auction winners, or by negotiating interference rights with other licensees). Incumbent licensees have been able to do this because their use of the bands was still permissible. In this case, the Commission proposes to make subscriber-based use of the 928/952/956 MHz bands an *impermissible* use. Under the proposed rules, Radscan could *not* negotiate with other licensees to expand its service areas because no licensee has the right to waive the Commission's rules. Moreover, Radscan's and ADEMCO's significant investment in equipment designed for subscriber use would be lost because this equipment could no longer be used in these bands except in existing service areas.

On a previous occasion, the Commission considered this grandfathering issue in the context of MAS channel bandwidths, and found that existing uses, and not just existing licenses, should be grandfathered. When the Commission initially established the MAS service, it adopted 25 kHz as the standard bandwidth for MAS channels.[34/] In 1988, the Commission revised its 1982 rules to specify a standard MAS channel bandwidth of 12.5 kHz; however, it

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[33/](...continued)
the Multipoint Distribution Service and in the Instructional Television Fixed Service, Report and Order, 10 FCC Rcd 9589, 9618 (1995) ("[i]ncumbents . . . will not be free to expand further their service area[s]"). In the Multipoint Distribution Service, incumbents' service areas were expanded from 710 square miles to 3848 square miles at the same time the restriction went into effect. *Id.* at ¶ 56.

[34/] *Amendment of Parts 2 of the Commission's Rules governing Frequency Allocations, 22 of the Commission's Rules governing the Public Mobile Radio Services, and 94 of the Rules governing the Private Operational-Fixed (Microwave) Service to reallocate forty-eight 25 kHz channels in the 900 MHz range for multiple-address radio systems, Second Report and Order*, 88 F.C.C.2d 1173, 1176 (1982).

grandfathered indefinitely all 25 kHz MAS facilities licensed before 1988.[35/] Under the Commission's then-current MAS guidelines, Radscan was permitted to expand its existing MAS service areas using 25 kHz channels, due to the incompatibility of 25 kHz and 12.5 kHz operations.

Subsequently, the Commission deleted the 25 kHz grandfathering rule and, in its place, required MAS licensees to migrate to 12.5 kHz systems or justify their continued use of 25 kHz bandwidths.[36/] Radscan petitioned for reconsideration, pointing out to the Commission that because 12.5 kHz operations and 25 kHz operations are technically incompatible, the Commission's action would require Radscan to forgo all further expansion. The Commission recognized its error and reinstated the 25 kHz grandfathering rule as Radscan had requested.[37/] Radscan currently expands its existing markets as subscriber demand requires through additional licenses on its existing channels. Moreover, the Commission continues to grant Radscan master station licenses in new markets using 25 kHz channels.[38/]

The Commission's present proposal to reallocate the 928/952/956 MHz bands exclusively for private, internal use is strikingly similar to the 25 kHz grandfathering issue. The Commission again proposes to change the rules under which Radscan operates, just as it did

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[35/] *Amendment of §§ 22.501(g)(2) and 94.65(a)(1) of the Rules and Regulations to Re-Channel the 900 MHz Multiple Address Frequencies, Report and Order*, 3 FCC Rcd 1564, 1566 (1988) (subsequent history omitted).

[36/] *Amendment of the Rules to Eliminate Grandfathering Provisions Applicable to Licensees on MAS Frequencies, Report and Order*, 6 FCC Rcd 3721 (1991).

[37/] *See MAS Reconsideration Order.*

[38/] Since the reinstatement of the 25 kHz grandfathering rule in the *MAS Reconsideration Order*, Radscan has constructed new systems in Las Vegas, Memphis and Nashville. New licenses with 25 kHz bandwidths are currently permitted with a showing of need. 47 C.F.R. § 101.147(b).

when it eliminated the 25 kHz grandfathering rule, and again the proposal would effectively limit Radscan to its present licenses with no possibility of expansion. Just as it did before, the Commission should take steps to ensure that licensees that have built their businesses under existing rules are not harmed by new rules without compelling justification. Indeed, the need to grandfather existing uses in this proceeding is even more compelling than it was four years ago because saturation of the 928/952/956 MHz bands has made it nearly impossible for any applicants *except* existing licensees to make efficient use of these frequencies.

IV. THE COMMISSION SHOULD PERMIT INCUMBENT SUBSCRIBER-BASED LICENSEES IN THE 928/952/956 MHz BANDS TO CONVERT TO ECONOMIC AREA LICENSES.

The Commission has requested comment on whether it should retain the current site-by-site licensing scheme for the 928/952/959 MHz bands, or adopt a geographic licensing approach.[39/] Radscan urges the Commission to adopt optional Economic Area (EA) licensing for subscriber-based operations in the 928/952/956 MHz bands.

The Commission has, in other proceedings, permitted a site-by-site licensee to convert a group of licenses to a single geographic-area license covering the same service area contour.[40/] In this proceeding, the Commission should go one step further and permit incumbent subscriber-based MAS licensees in the 928/952/956 MHz bands, upon petition to the Commission, to convert any site license or group of site licenses within an EA to a geographic-area license for that EA. The Commission should issue these EA licenses on individual channel

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[39/] *Notice* at ¶¶ 15, 42.

[40/] *See 800 MHz SMR Order*, 11 FCC Rcd at 1514 ("we will allow [incumbents] to convert their current site-by-site licenses to a single license authorizing operations throughout the incumbents' contiguous and overlapping service area contours of [their] constructed multiple sites").

pairs in the 928/952 MHz bands, and on individual channels in the 956 MHz band. As described below, if more than one subscriber-based licensee asserts rights to the same channels within the same EA, the Commission should hold an auction for that EA license.

Site-by-site licensees in the 928/952/956 MHz bands converting to geographic-area licenses should not be limited to their existing service contours, but instead should acquire rights to an entire EA. In the other services where such conversions have been permitted but restricted to existing service contours, the Commission has auctioned the geographic areas within which the incumbent site-by-site licensees were located.[41/] By contrast, the Commission is not proposing to auction the 928/952/956 MHz bands. Thus, in these bands, there are no geographic-area auction winners whose rights would be infringed by permitting incumbent site-by-site licensees to expand their service areas.

As Radscan pointed out above, there is little possibility that a commercially successful MAS system could be shoehorned into an EA in which an incumbent subscriber-based licensee presently operates an MAS system. For example, the geographic-area rights to Radscan's channels surrounding one of Radscan's service areas are of no commercial value to any MAS licensee but Radscan. Therefore, the Commission would lose nothing, and gain a great deal of administrative convenience, by extending geographic-area rights to the boundaries of the enclosing EA.

Under Radscan's proposal, each petition for conversion from site-by-site licenses to an EA license would be placed on public notice. If, during the comment period, another subscriber-based licensee wished to convert its licenses within the same EA on the same channels to a geographic-area license, or if any other party wished to acquire rights to the same channels

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[41/] *See, e.g., id.* at 1513.